The Remediator

Newsletter of the Remediation and Redevelopment Division

www.michigan.gov/degrrd

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The DEQ recently demolished the Cemex-Medusa, Holnam, (both shown here) and LaFarge cement silos on the Detroit Riverfront. The 12.5 acre, $2.7 million demolition project cleared the largest remaining obstacles to redevelopment of the East Riverfront . It will allow expansion of the Detroit Riverwalk and become part of theTri-Centennial State Park and Harbor area. Read about this major joint DEQ-Detroit economic development effort.

What's Inside

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From the Division Chief

Andrew Hogarth

On March 21, 2006, the Refined Petroleum Cleanup Advisory Council transmitted its recommendations for Part 215 amendments for the initial leaking underground storage tank program to the legislature and Governor. The letter and proposed Part 215 amendments can be seen at Recommendations. Further background on this matter is included in the article below, ***Refined Petroleum Fund Update***.

Several meetings of the Part 201 Discussion Group described in our Summer 2005 Newsletter were held in the late summer and fall of 2005. The group wrestled with a number of issues during those meetings and concluded that many matters require more intensive discussion. To facilitate progress, the group has decided to subdivide further discussion into four key topic areas: liability, complexity, program administration, and brownfield redevelopment. Additional participants are being identified for each group. It was the group's consensus that to be most effective, the discussions will need to be led by professional facilitators that have experience with Michigan's programs. The DEQ is currently exploring that option. Discussions will resume as soon as funding is arranged and a firm is hired to provide facilitation services. The National Brownfield Association has agreed to help with the effort. Although Michigan's program is often cited for its outstanding successes, I am hopeful that this process will lead to recommendations that will improve Michigan's cleanup and redevelopment program even further. Questions about the process may be directed to Patricia Brandt at 517-373-4710 or at brandtp@michigan.gov.

Refined Petroleum Fund Update

The Michigan legislature showed its support for the Refined Petroleum Cleanup Advisory Council's (Council) Initial Program Recommendations through their approval of the Fiscal Year 2006 appropriations bill. The Council was established by law (PA 390 of 2004) and includes members appointed by the Senate Majority Leader, the Speaker of the House of Representatives and the Governor. The Michigan Department of Environmental Quality (DEQ) is not a member of the Council; however, DEQ staff attend the Council's meetings to provide information regarding program history and operations, and cleanup backlog information. In June 2005, the Council provided its initial program recommendations to legislative leaders and the Governor, which were subsequently supported by the legislature through the appropriations process. The initial recommendations and the Council's recent letter of support to the legislature and Governor can be viewed at Recommendations.

The $102 million appropriations package includes a $45 million temporary reimbursement program for previously approved Michigan Underground Storage Tank Financial Assurance (MUSTFA) claims that meet certain eligibility requirements. Commencement of the program is contingent upon passage of legislation which RRD staff is currently drafting, after which a legislative sponsor will be sought.

The appropriation bill also designated $15 million to address high risk "orphan" sites where no liable or viable liable party can be identified. This

(Continued on next page)

LANDFILL REDEVELOPMENT - RECOMMENDED GUIDANCE BEING DEVELOPED

There are an estimated 1,600 abandoned and unregulated landfills scattered across Michigan. In many areas, particularly those near the larger population centers, old landfills occupy some of the last open space that remains undeveloped. The DEQ has received an increasing number of inquiries regarding the redevelopment potential of some of these sites. Because many of them are not regulated by current solid waste regulations, most of the inquiries have been directed to the RRD districts where the sites are located.

Many of the old abandoned and unregulated sites don't have a viable liable party; have had their post closure period elapse; or, predate current waste management laws and practices which would otherwise be implemented today. Many have also become a serious environmental concern as a result of either methane migration or impacted groundwater.

An RRD work group has been organized, under the leadership of James Ferrito of the Cadillac District Office, to come up with draft guidance on the redevelopment of properties adjacent to, and on the grounds of, landfilled areas. The guidance will discuss recommended practices for screening and characterization of abandoned landfills, as well as how Act 381 plan reviews, grants and loans, and Covenant Not To Sue requests should be handled. The guidance document will also provide information pertaining to how the development of abandoned landfills will relate to BEAs and Due Care plans, among other things.

The committee has prepared a draft policy for stakeholder review this spring. Once all the comments are received and compiled, the policy will be revised and re-routed internally for final review. For additional information please contact James Ferritto at ferrittj@michigan.gov or at (231) 775-3960.

For additional information about landfills, see RRD INFORMATION BULLETINS:

FORMER SANICEM LANDFILL
http://www.deq.state.mi.us/documents/deq-rrd-BULLETIN-SanicemInfoBulletinCEO-6-15-05.pdf

SOUTH MACOMB DISPOSAL AUTHORITY LANDFILLS
http://www.deq.state.mi.us/documents/deq-rrd-BULLETIN-SMDAInfoBull-April-2005.pdf

part of the program will also require passage of legislation before those dollars can by spent by the DEQ.

Lastly, the legislature appropriated $42 million for a refined petroleum product cleanup program. The Council is working to finalize its recommendations for a permanent refined petroleum product cleanup program, which will also require legislative changes in order to implement.

There has been information in the press regarding a potential increase in the fee to fund the leaking underground storage tank program. In 2004, the legislature authorized the continuation of collection of 7/8ths of a cent regulatory fee per gallon on all refined petroleum products sold for resale or consumption in this state through 2010. The Department of Treasury collects the fee and places the money into the Refined Petroleum Fund. Money from the Refined Petroleum Fund is used to address cleanups from leaking underground storage tanks. The reports of a proposed increase in the gas fee are based on the preliminary deliberations of the Council. The gas fee increase being discussed in the media is not a final recommendation of the Council. The Council is continuing to deliberate on their final recommendations for a permanent refined petroleum cleanup program.

Michigan's leaking underground storage tank program is facing future funding challenges with regard to the backlog of open releases and newly reported releases each year. The DEQ estimates that of the approximately 9,000 open releases, about 3,000 are being addressed by liable parties, and about 4,200 are considered orphan sites which are expected to require public funding to manage risks at those sites. Approximately 1,800 need further investigation to determine the viability of a liable party to cover the costs of remediation. The price tag for addressing the 4,200 orphan sites is estimated to be more than $1.5 billion. Even if all the annual gas fee collections (totaling approximately $60 million a year) were to be spent on orphan sites, the DEQ estimates that it will take almost 30 years to fund the necessary remediation activities at all known orphan sites. At the current annual funding level of $22 million, it would take more than 77 years. This does not account for:

- Inflation
- The fact that state funded corrective action is designed to control significant risks and not to achieve full cleanup, as required by liable parties

A confounding factor in estimating future costs of addressing the risks posed by releases is that each site is unique and the costs for response actions are highly variable, ranging from less than $10,000 to more than $2 million.

The DEQ is hopeful that sufficient funding sources can be implemented by the legislature to ensure the health and safety of Michigan citizens regarding leaking underground storage tanks, and to help the DEQ address abandoned, contaminated underground tank sites so they may be returned to a productive and economically viable use in communities around the state.

Did You Know?

On October 9, 2005, a US Navy Explosive Ordnance Disposal Team, at the request of RRD, exploded two bombs and a torpedo warhead near the Waugoshance Lighthouse located in Lake Michigan off Charlevoix!

This FUDS (Formerly Used Defense Site) had been used for target practice during World War II, and over the years suspicious objects had been reported in the water.

The site was investigated by RRD-FUDS staff, Bill Harmon and Bob Delaney, RRD's Georeference Specialist, Nick Ekel, as well as staff from the contractor, Underwater Ordnance Recovery, Inc. of Virginia.

The team located two 750 pound US M117 General Purpose Bombs and one torpedo warhead separated from its propulsion unit.

Unexploded US M117 General Purpose Bomb at Waugoshance Lighthouse in Lake Michigan

Because it is difficult to determine whether unexploded ordnance is armed, it has to be treated as if it is. Since armed ordnance cannot be moved manually, the most common procedure is to detonate it in place.

In this case, to avoid damage to the lighthouse with a complete or 'high order' explosion, a 'low order' detonation procedure was used, explosively breaking apart the ordnance. The remains were collected and moved to a safe location.

For additional information about this or any other FUDS site contact William Harmon at (517)335-6237 or harmonw@michigan.gov, or Robert Delaney at (517)373-7406 or delaneyr@michigan.gov.

Contractor's Corner

Update on RRD Level of Effort and Project Management Contracts

The State Administrative Board awarded ten new Level of Effort (LOE) contracts on October 18, 2005. These contracts will run through October 18, 2008, after which the RRD will have the option of extending for one additional year. The following firms were awarded contracts worth up to $3,000,000 for professional services:

DLZ Michigan, Inc.
Earth Tech, Inc.
Environmental Consulting and Technology, Inc.
Gannett Fleming of Michigan, Inc.
MACTEC Engineering and Consulting of Michigan, Inc.
Malcolm Pirnie, Inc.
STS Consultants, Ltd.
The Mannik & Smith Group, Inc.
Weston Solutions, Inc.
Wilcox Professional Services, LLC.

RRD expects most of the work under these contracts to be funded by the Refined Petroleum Fund. Specific work assignments will be made once adequate funding has been secured. For additional information on the LOE program, please contact Dave Wahl, LOE Contract Administrator, at 517-373-3898 or by e-mail at wahld@michigan.gov.

As directed by the Department of Management and Budget (DMB), the Project Management (PM) Contracts were closed when their end dates were reached (the former Storage Tank Division contract ended December 19, 2005; the former Environmental Response Division contract ended January 16, 2006). However, several projects have been allowed to continue throughout 2006 if work underway can be completed by December 31, 2006. Other projects currently managed through the PM contracts will be turned over to LOE contracts for the professional services component of the work. There have also been several projects switched to DMB's Discretionary Contracts. In an effort to identify the most appropriate approach for those projects requiring work beyond the end date of the PM contract, Contract Procurement Unit staff contacted the district project managers and PM firms, requesting that they determine how best to address each project's needs. The Contract Procurement Unit is currently in the process of making all of the requested transitions.

For additional information, contact Gary Simons at 517-373-2811 or by e-mail at simonsg@michigan.gov .

RRD Responds to Communities Seeking EPA Funds

Again in 2005, the RRD's Funding and Support Unit (FSU) supplied letters of acknowledgement for local governments and non-profits that applied for EPA Brownfield Grants. In 2004, the staff of the FSU wrote 24 letters of acknowledgement. Seventeen proposals were awarded grants totaling over $6.5 million. In 2005, 34 requests were responded to by FSU and three by RRD districts. Communities in Michigan applied for approximately $18 million in assessment, cleanup, and revolving loan fund grants.

The EPA Brownfield program requires the state environmental agency to provide acknowledgement letters to municipalities and non-profit groups applying for funds. This grant program is in its third year, and some $120 million will be made available to eligible entities across the U.S. For more information, contact: Ron Smedley, Brownfield Redevelopment Coordinator, at 517-373-4805, or at smedleyr@michigan.gov.

New Grant Proposal - Quantifying Abandoned Dumps in Southeast Michigan

The RRD recently developed its third EPA Brownfield Grant proposal in as many years. The focus for this proposal is on the assessment of abandoned dumps in Southeast Michigan, including sites in Oakland, Wayne, Macomb, St. Clair, and Genesee counties. The RRD has identified hundreds of dump locations in these counties, many of which closed decades ago.

"While the RRD has some information about the location of some of these former dump sites, much of that information lacks useful detail" stated Philip Schrantz, Field Operations Section Chief. "These funds will help us identify the locations of these sites and allow us to begin to assess potential risks."

The proposal was submitted to the EPA on December 12, 2005, after the public had a chance to view it and make comments. As in previous grant rounds, the proposal can be found on the DEQ website, www.michigan.gov/deq under Land and Land Redevelopment, Brownfield Redevelopment Overview.

The RRD has successfully applied for two other grants, including the Rural Brownfield Assessment grant, received in 2004 and the Hoff Industries Brownfield Cleanup Grant, received in June 2005. If this proposal is selected for a grant, RRD staff could start working on it as soon as November 2006.

Brownfields 2005 Conference a Success

The premier brownfield cleanup and redevelopment conference, Brownfields 2005, was held from November 2-4 in Denver, Colorado, at the Colorado Convention Center. RRD sent two staff to attend this national event to promote Michigan's unmatched brownfield program, to market available properties, and to bring home new information from some of the over 150 valuable educational sessions. This conference had over 5,000 attendees, setting a new record for the yearly event. This year the MDEQ set up a display in the exhibition hall, highlighting several brownfield cleanup projects, completed cleanups at sites that can now be redeveloped, and sites which have been redeveloped after the state completed remediation or investigation work.

Sunny Krajcovic of RRD and Bruce Moore of ESSD staff the table at 'Brownfields 2005' in Denver

In 2004, MDEQ was represented with the rest of the Region 5 states, at a separate display, but didn't have enough space to give a bigger picture of the brownfield successes in Michigan or to market the state specifically. "This year we had our own corner booth, next to the other Region 5 states, and of course we outshone the competition in terms of the number of cleanups and the presentation of our success stories," exclaimed Ron Smedley. He and Sunny Krajcovic staffed the booth and talked with local officials from Michigan and other states. Bruce Moore from the ESSD also helped spread the news of the state's programs and funding availability.

On November 2, RRD presented 20 tax-reverted properties for sale at the second annual Brownfield Transaction Forum, sponsored by the International City County Managers Association (ICMA). The Transaction Forum is designed to bring property owners and developers together, presenting market and environmental information about specific brownfield properties and discussing the procedures to acquire and redevelop the sites. Several interested parties discussed the availability of the "Bona-fide Brownfield" **(*any site that has been remediated using state funds and is in a status that would allow redevelopment. The DEQ would provide "enhanced" assistance to prospective redevelopers for these sites.*)** sites with Ron, and were provided with information sheets and applications from the Michigan Land Bank Fast Track Authority, which actually controls the properties, most of which were state-funded cleanup sites. As an additional bonus, ICMA took out space in the exhibition hall for the remainder of the conference so that the sites could continue to be marketed. Many of the Bona-fide Brownfield sites have the potential to be strong redevelopment projects for those with vision.

New Criteria for p-CBSA Developed after Discovery at St. Louis Superfund Site

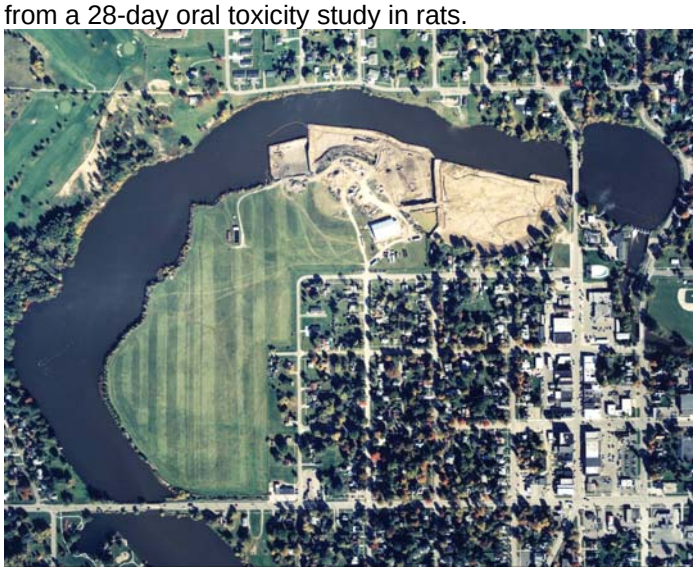
The Velsicol Superfund site is located in the city of St. Louis, Michigan on the shores of the Pine River. The Michigan Chemical Corporation (MCC) began manufacturing chemicals after purchase of this site in 1935. MCC was sold to the Velsicol Chemical Corporation in 1965, where they continued to manufacture chemicals until the plant was closed in 1977. MCC started out by extracting brine from numerous wells in the St. Louis area to obtain the basic minerals for their line of nine liquid and eight granular forms of bromide. Additional products manufactured at the plant over the years include magnesium oxide sold as an animal feed supplement, the pesticide dichlorodiphenyltrichloroethane better known as DDT, fire retardants consisting of tris (2,3-dibromoproyl) phosphate (TRIS) and polybrominated biphenyls (PBB), radioactive rare earths, soil and grain fumigants such as methyl bromide, and hexabromobenzene (HHB).

Velsicol Chemical attempted to address the contamination at the plant site by building a containment system around the entire 52 acre site. The containment system consists of a soil cap and a bentonite slurry wall. Velsicol Chemical conducted this work under a consent order with the United States Environmental Protection Agency (USEPA) and the Department of Environmental Quality (MDEQ). A review of the existing site data by the MDEQ indicated that the containment system was not functioning as designed. In December 2000, the MDEQ carried out the first of a three-phase Remedial Investigation that confirmed that the cap, the slurry wall, and the bottom of the containment system were leaking, and contamination was migrating to both the Pine River and the drinking water aquifer.

Velsicol Chemical in the 1970s

Groundwater sampling conducted by the USEPA in September 2004 and May 2005 detected the chemical para-chlorobenzene-sulfonic acid (p-CBSA) in several site monitoring wells and at low concentrations in three St. Louis municipal drinking water wells. The chemical p-CBSA is a by-product of the DDT manufacturing conducted at the Velsicol Chemical plant site. p-CBSA is not measured by routine analytical (continued at right) methods and must be measured using a special USEPA methodology. After the USEPA announced the presence of p-CBSA in municipal wells on September 23, 2005, the MDEQ conducted an extensive literature search for information and calculated interim drinking water criteria (DWC) under Part 201/213, Environmental Remediation, of the Natural Resources and Environmental Protection Act 1994 PA 451, as amended (Part 201/213).

This is the first time p-CBSA has been included in the Part 201 Generic Cleanup Criteria and Screening Levels/Part 213 Risk Based Screening Levels tables. If a substance has not previously been listed in the cleanup criteria tables, the MDEQ may determine that it is a hazardous substance and develop generic criteria using best available information about the toxicological and physical chemical properties of the substance under Administrative Rule. The criteria for p-CBSA are based on an oral reference dose (RfD) of 1 mg/kg-day. The RfD comes from a 28-day oral toxicity study in rats.



Velsicol Chemical Now

The criteria generated using the RfD are:

-Residential drinking water criteria (DWC)
= 7,300 parts per billion
- Industrial/Commercial DWC= 21,000 parts per billion
- Soil criteria protective of residential DWC
=1.5E +05 parts per billion
- Soil criteria protection of Industrial/Commercial DWC
=4.2E+05 parts per billion

The interim criteria for p-CBSA have been incorporated in the January 2006 amendment to the Groundwater and Soil Criteria Tables contained in the RRD Operational Memorandum 1, "Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels." The para-CBSA criteria became final on April 10, 2006.

Site-specific questions regarding the p-CBSA criteria should be presented to the project manager serving the facility. For further information about the Velsicol Chemical Superfund site, contact Scott Cornelius, Project Manager, RRD Superfund Section. The district map, phone, and address can be accessed here. For questions regarding criteria development for p-CBSA, please contact Ms. Christine Flaga, Chief, RRD Toxicology Unit.

Avoiding Brownfield Redevelopment Pitfalls – Some General Perspectives

By Philip Schrantz, Chief, Field Operations Section

The RRD works very hard to facilitate environmentally sound redevelopment projects across Michigan. Michigan's wide array of legal, administrative, and financial tools have made the state a leader in brownfield redevelopment. With proper planning, coordination, and execution, brownfield redevelopment projects can be highly successful, bringing new vitality to Michigan communities. Happily, most brownfield redevelopment projects are successful. Some, however, prove to be more difficult. Based on the RRD's collective experience, the following ideas are offered to help parties interested in pursuing redevelopment projects avoid pitfalls that can be both frustrating and expensive.

Beware of Irrational Exuberance – Though difficulties can arise in any project for a variety of reasons, one of the more common sources of controversy is when the parties involved in a cleanup/redevelopment project discover that the plans and expectations they have created are suddenly cast into disarray as the result of a lack of understanding about site conditions and the statutory or regulatory implications that arise. While it's true that the flexibility of Michigan's cleanup and redevelopment program can facilitate projects that historically would not have been viable, it's still necessary for parties to aggressively gather information and plan carefully in order to avoid "driving ahead of their lights".

Knowledge Is Power – Parties pursuing redevelopment projects can confront unexpected difficulties when the information they possess is not adequate to support their goals. There is a direct relationship between a project's data needs and how dramatic a change in land use will result from the redevelopment. For example, redevelopment projects that involve significant subsurface activity, or convert former industrial properties to residential or recreational uses, often result in the need to consider and address more exposure pathways, typically requiring additional site characterization.

Similar challenges can also arise when parties pursuing redevelopment projects have not yet refined their project plans sufficiently. In such cases, it can be very challenging to accurately determine a project's data needs. Having clearly defined goals can greatly facilitate cost-effective data gathering. Having an understanding of the horizontal and vertical extent of soils and groundwater impacts at a project site that is commensurate with the project's goals can be critical to a project's success. While this can be challenging, the benefits in terms of reduced time and energy spent exploring unproductive options, reduced iterations, and smoother working relationships with regulators will almost always pay off. In addition, if disputes arise, those disagreements will have a narrower scope and can therefore be more readily resolved as a result of all parties having a clear understanding of the facts.

Just as it is critical to have a clear understanding of the site, it's also critical to make sure that you have a complete and up-to-date understanding of the statue and rules and how they apply to the project at hand. Knowing how the law and rules work and what options and requirements they create can help reduce conflict and the pursuit of unproductive strategies.

Build In Flexibility – It's important to recognize that no matter how well informed, the process of cleaning up and redeveloping sites is inherently iterative in nature. Parties pursuing such projects need to understand that it's common for new information to emerge during a project that can change plans, schedules, and sometimes overall goals. Again, the more appropriately a site is characterized, the less likely it is that these unforeseen events will have significant effect. Understanding this in advance and establishing appropriate contingencies can make the difference between project failure and success.

Take the Long View – While today's business environment is more aggressively time- and cost-driven than ever, it's important to recognize that many of the decisions made during site cleanup and redevelopment projects have long-term, and in some cases perpetual, consequences. Generally speaking, the more a project relies upon engineering and/or institutional controls, the more onerous those ongoing obligations will be. In addition, such approaches can appear to be cost-effective when examined over a short time period, but may actually be far less so when the longer-term costs of monitoring, operation, and maintenance are considered. Frequently, strategies that rely on a combination of aggressive source removal/control, direct remediation of significant impacts, and the intelligent use of restrictions and controls, though more expensive initially, will ultimately be more reliable and cost-effective than strategies that seek to rely solely on restrictions and controls.

Communicate Early and Often – RRD staff can play a useful role in sorting out all of the foregoing, but only if they are involved early in the process, before rigid plans and business commitments are made. While our resources are limited and it is not RRD staff's role to serve as consultants, they can nonetheless provide guidance and assist parties in identifying strategies that will satisfy statutory and regulatory requirements and result in reliable and cost-effective remedies. One thread that is common to nearly all of the truly successful cleanup and redevelopment projects that have been completed in the last few years is that parties pursuing those projects established and maintained close, productive working relationships with their counterparts in RRD.

Additional information regarding brownfield redevelopment can be obtained by contacting your local RRD District Office.

QC/QP Program statistics as of March 2006:

Currently approved QCs: **154**

Currently approved CPs: **408**

Revoked QCs: **23**

Revoked CPs: **113**

QC applications rejected or denied: **143**

CP applications rejected or denied: **402**

Voluntarily Discontinued QCs: **16**

Voluntarily Discontinued CPs: **39**

General information regarding the QC/CP Program can be found on the following web site:
http://www.michigan.gov/deq/0,1607,7-135-3311_4115_4238-9723--,00.html

If you have questions regarding the QC/CP Program, please contact Ms. Terri Harmon at 517-335-7272 or by email at harmonTL@michigan.gov

Clarifications Regarding Qualified Underground Storage Tank Consultants (QC) and Certified Underground Storage Tank Professionals (CP)

The QC/CP (Qualified Consultants/Certified Professionals) Program has gone through major changes since its inception. Pursuant to the Michigan Underground Storage Tank Financial Assurance (MUSTFA) Act, 1998 PA 518, the first list of approved contractors was published on May 10, 1990. The 1993 amendments to the MUSTFA Act included specific requirements for certification of contractors as well as establishing the requirements for certified professionals. The most important change came with the promulgation of the QC/CP Rules pursuant to Part 215, Refined Petroleum Fund (formerly MUSTFA), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, which took effect September 1, 1999. Since that time, the program has been evolving into a streamlined process from receipt of the initial application, through annual updates, and the enforcement of the QC/CP Rules. In addition, the RRD has added more staff in the Part 213/215 Enforcement Unit to actively pursue enforcement of Rule violations.

Contractual Relationships

Contracts between owner/operators (O/Os), QCs, and non-QC subcontractors, have become a reoccurring source of questions and problems. This is to clarify the Michigan Department of Environmental Quality's (MDEQ's) position, to assure that there are no misunderstandings as to what is required of QCs. The MDEQ's position has been discussed with the Department of Attorney General staff, who concur with the MDEQ's reading of the Part 213 statutory requirements.

Part 213 requires O/Os of leaking underground storage tank (LUST) sites to retain a consultant to perform the corrective action activities. A consultant is further defined as "a person on the list of qualified underground storage tank consultants prepared pursuant to section 21542". Therefore, contracts for corrective action must be directly between the O/O of the LUST site and the QC. If a QC retains a subcontractor to perform certain corrective action activities on a project, those two firms should in turn have a contract clearly showing the non-QC firm as a subcontractor to the QC. The Certified Underground Storage Tank Professional (CP) employed by the QC is mandated by Part 215 to have an active operational role, which is defined as "direct involvement and oversight of corrective actions..." This is required even if the subcontractor employs a CP.

Work that has not been overseen by a CP employed directly by a QC will not be accepted, and the O/O will have to pay to have the work repeated by an approved QC with proper CP oversight. A QC cannot submit a Part 213 report if there is not a direct contractual relationship between the QC and O/O. Likewise, a CP cannot sign off on Part 213 corrective action reports if they did not directly oversee or perform the work. Besides rejecting the report at the owner's expense, this is also cause for the MDEQ to initiate revocation of the QC and/or CP's certification.

To avoid potential legal disputes, the MDEQ strongly advises a written contract exist among all parties involved as opposed to a verbal agreement. Verbal agreements are not acceptable as a "contract" between the QC and O/O.

Hiring a Qualified Underground Storage Tank Consultant

As the O/O or responsible party, you must be aware that you are ultimately responsible for the investigation, reporting, and cleanup of your release. Therefore, extreme care should be used when selecting an environmental consultant, because the responsibility remains with the O/O or responsible party even though a consulting firm did the actual work. MDEQ does not endorse any specific firm on the list. Owners and operators are cautioned that the approved QCs have only been determined to meet the minimum education and experience requirements necessary to undertake corrective actions at LUST sites in Michigan. The MDEQ is not responsible or liable for the performance of the QC.
(Continued on next page)

ACRONYM OF THE DAY:

"IRDC" OR **I**NTERIM **R**ESPONSE **D**ESIGNED TO MEET **C**RITERIA

The term "IRDC" arises out of the provisions of R 299.5526(6), (7), and (8) of the Part 201 Rules and is used to refer to a particular type of interim response activity (defined in Section 20101(1)(u) of Part 201) that is intended to meet applicable Part 201 cleanup criteria for one or more environmental media in all or a portion of a facility. While not as comprehensive as formal Remedial Action Plans, properly planned and implemented IRDCs can be highly useful tools in addressing critical environmental risks at Part 201 facilities. For example, a party could perform cleanup actions sufficient to completely address the exposure risks associated with heavily contaminated soils on a portion of their facility in accordance with all applicable soil criteria, while not pursuing similar actions for groundwater. IRDCs can be implemented to achieve compliance with either generic or limited criteria, but those relying on limited criteria will require DEQ approval of any associated land or resource use restrictions, institutional controls, or mixing zone determinations that are relied upon as part of the IRDC. Liable parties performing IRDCs remain liable for any remaining contamination not addressed by the IRDC.

For more detailed information about IRDCs and how they can be used, please contact your nearest RRD District Office or Ms. Patty Brandt, Part 201 Program Specialist, at 517-335-4710 or by e-mail.

Tips for Hiring a QC

- Request a Statement of Qualifications. The document should include employee resumes, project summaries, and references.
- Ask for references from previous clients in your local area – AND CHECK THEM!
- Do they offer field and professional services? Who are their subcontractors?
- Inquire about their errors and omissions and pollution liability insurances.
- Do they stay within their projected budgets or are change orders a common practice? Ask about billing procedures.
- Ask how they keep up with the current rules and regulations.
- Ask about their workload. How soon can they start on your project, and what type of priority will your project receive?
- Consultants based in your local area will have less costly travel expenses.
- Ask about their experience and qualifications in the type of work you need, and whether they have had audited closures from the MDEQ. What percentage of their work is related to the services you require? What are their fields of specialty?
- Do they have a good Health and Safety record?
- What are their Quality Assurance/Quality Control procedures?
- Ask what approach they are considering for your site. Be skeptical of those who hide behind technical jargon and cannot properly explain procedures in plain language.
- Ask if the approach they are proposing to address your site has been successfully implemented and has achieved the desired results at sites with contaminants and hydrogeological conditions similar to yours.
- A patent for a new product is not a guarantee that the product will work.

Get a minimum of three bids. The cheapest bid is not always the best bid

Stay Informed

Do not assume the consultant is taking care of everything. Follow up and make sure everything is being done to resolve the site and maintain compliance with the law. We recommend an agreed upon schedule be developed with important dates such as when reports are required to be submitted to the MDEQ. You are encouraged to periodically contact the MDEQ project manager, who will answer any questions or concerns regarding your facility. Once again, remember that you are responsible for everything your consultant does or fails to do!

Operational Memorandum Update:

The peer review process has been completed for the following Operational Memorandum (Op Memo) documents:

- Groundwater Modeling (Op Memo 4, Attachment 7)
- Sediments (Op Memo 4, Attachment 3)
- Monitored Natural Attenuation (Op Memo 4 Attachment 8)
- In-situ Injection (Op Memo 4, Attachment 9)
- Soil Gas and Indoor Air (Op Memo 4, Attachment 5)

Comments have been received from those who volunteered to participate in the peer review process and are being incorporated into revised documents. The revisions to these documents will be released as interim final documents. When released the interim final documents will become effective, but RRD will continue to accept comments for six months and will finalize the documents based upon comments received. Watch for listserver notices over the summer for release of the interim final documents.

Additional documents are being prepared to be released for peer review. If you are interested in volunteering to assist in the peer review process please contact Ms. Patty Brandt @ brandtp@michigan.gov or 517-373-4710. For a summary about Op Memos and the stakeholder review process see our Summer 2005 Newsletter.

PEAS Report Leads to Warning Regarding PCBs in Older Submersible Water Pumps

The DEQ Water Bureau recently issued an *Advisory on PCBs in Older Submersible Water Well Pumps* as the result of a PEAS (Pollution Emergency Alerting System) report investigated by Thomas Simpson, of RRD's Lansing Field Office. A homeowner had a new pump installed by a local well driller, and in the process the old pump fell into the well and was not retrieved. The homeowner later noticed a strong petroleum odor in the water and called PEAS, but not before his family drank the water and used it for significant landscaping projects, filling the swimming pool, and steam cleaning all the carpets in the home. When Tom took samples of the water and soil they were found to have concentrations of PCBs well above the 0.5 ug/L USEPA drinking water standard.

It seems that several two-wire submersible pumps manufactured prior to 1980 contain electrical capacitors with PCBs and that some submersible pump motors from that time also contain nonfood grade lubricating oil that may contain PCBs. Many of these pumps have already been replaced, but there are a large number that have not, and there is no way to determine where those pumps are. Pump manufacturers will pay for cleanups, but awareness and prevention are more important goals. The DEQ wants well drillers, pump installers, and local health departments to be aware of potential contamination when these pumps are removed and to call the Water Bureau, Contamination Investigation Unit, at 517-241-1374 when a submersible pump known to have PCBs is encountered, **before** replacing it. A list of PCB - containing pumps can be found on DEQ's web site at *Advisory on PCBs in Older Submersible Water Well Pumps*.

Links

DEQ Calendar

RRD Press Releases

February 2006
2/22/06: Deal Approved for Financing of Cleanup at Trenton Steel Plant

January 2006
1/3/06: EPA Brownfield Cleanup Grant for Grand Rapids Site

December 2005
12/27/05: DEQ Grand Rapids District Office Moving

November 2005
11/29/05: DEQ Seeks Public Comment on Brownfield Redevelopment Grant Funds

11/14/05: Settlement for Oil and Gas Waste Pit Cleanup

October 2005
10/3/05: Macomb County Landfills Case Litigation Settled

September 2005
9/27/05: Contamination Cleanup Effort in Ann Arbor

9/26/05: DEQ and EPA Partner to Cleanup Hazardous Waste Site

Revised Arsenic and Bromate Drinking Water Cleanup Criteria

Part 201 residential and industrial/commercial drinking water criteria for arsenic have been revised and new drinking water criteria have been developed for bromate. The associated soil criteria protective of drinking water have also been revised and generated for arsenic and bromate, respectively. All the drinking water related criteria became effective October 31, 2005. Interim bromate criteria were also developed for the following pathways: groundwater surface water interface (GSI); groundwater contact; soil criteria protective of GSI and GCC; and soil direct contact. The MDEQ allowed a 45 day public comment period for the interim bromate criteria, which ended on December 15, 2005. The interim Part 201 criteria for bromate will become final on May 1, 2006.

Additional information on the criteria is available here or contact Patricia Brandt, 517-335-4710 or at brandtp@michigan.gov.

RRD Funding Opens Prime Redevelopment Possibilities in Downtown Detroit

The RRD has completed a cleanup and demolition project that has opened a six acre property in the Grand Circus Park National Historic District in Detroit, within walking distance of Comerica Park and Ford Field, for redevelopment. The former Statler-Hilton Hotel was located on the west side of Washington Blvd., between Bagley and Park Streets, adjacent to the emerging Necklace Loft District. The building was a structure of 515,000 square feet and 800 guestrooms that was built in 1914 as part of the Statler chain, and acquired by the Hilton Hotel chain in 1954. It was closed in 1975 and has been unoccupied since.

The former Statler-Hilton Hotel on Grand Circus Park. The People Mover is four feet from the building in some places. Demolition work on the Park and Bagley sides of the building had to be completed between 12 am and 5 am so it could remain in operation.

The building was demolished and the site cleaned up in 2005, but an effort to restore use of the hotel began in 1999, when DEQ funds were used for site assessment in preparation for rehabilitation. At that time PCB tainted water was removed from the basement, and asbestos, lead, and other miscellaneous hazardous materials and debris were removed. When private developers could not economically renovate or redevelop the building, the City of Detroit again called on the DEQ for assistance. The property had become a serious impediment to redevelopment of adjacent areas. Funding from the DEQ has allowed the removal of 625 tons of soil and concrete and safe demolition of the building.

Because of its proximity to the People Mover and other buildings, the building could not be razed by explosives and careful vibration and air quality monitoring were necessary.

Site work began on December 13, 2004, with removal, treatment, and discharge of PCB contaminated water from the basement and subbasement to the storm sewer. Site work continued with abatement of all concealed remaining asbestos and manual demolition of all 18 floors. The actual building demolition was completed October 27, 2005.

The now vacant lot is triangular in shape and approximately 32,000 square feet. The parcel is a short walk from both Comerica Park and Ford Field. The Detroit Economic Growth Corporation will advertise for proposals to redevelop the six acre property.

This project was overseen by project manager Patricia Thornton, Geologist in the Detroit District Office. A more detailed view of the project can be seen here.

RRD staff are located at MDEQ District Offices around the state. Locations and contact information can be found by clicking anywhere on the map.

The MDEQ Remediation and Redevelopment Division (RRD) administers programs that facilitate the cleanup and redevelopment of contaminated sites statewide, providing for a cleaner, healthier and more productive environment for you!

The purpose of this newsletter is to provide information about our programs, specifically, Part 201 (Environmental Remediation) and Part 213 (Leaking Underground Storage Tanks) and portions of Part 215 (Refined Petroleum Fund - formerly Michigan Underground Storage Tank Financial Assurance [MUSTFA]), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. In addition, the RRD manages portions of the federal Superfund Program, established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

For information or assistance, contact MDEQ, RRD, P.O. Box 30426, Lansing, MI 48909; 517-373-9837; fax: 517-373-9657; www.michigan.gov/deqrrd

We are located in Constitution Hall, 525 W. Allegan, Lansing, MI

Inside the RRD

RRD has hired or transferred several staff members recently. Here are some introductions:

New Toxicologists

Dr. Divinia Stemm has joined RRD's Toxicology Unit. Dr. Stemm finished her Bachelor of Science degree and a Master of Public Health at the University of the Philippines, pursued a Master of Environmental Science in Japan, and finally challenged herself further by completing a Ph.D. program in toxicology at the University of Kentucky just recently. Divinia brings with her experience working as a safety and environmental consultant and an environmental manager with a travel trailer manufacturing company in Indiana. She has also conducted research on methyl mercury (Japan) and PCBs and selenium (U of KY). Divina is very interested in risk assessment and looks forward to developing her expertise in the cleanup program. Divinia hopes to be able to work well with both regulators (she is one now) and the regulated community, while keeping focus on the following goal: to preserve the environment for future generations and prevent or minimize public health and environmental risks.

Also new to RRD's Toxicology Unit, **Dr. Eric Wildfang** received his B.S. in Medical Technology from The University of Michigan-Flint and gained employment at Lansing General Hospital as a medical technologist. He transitioned to the environmental industry by joining Eder Associates, Inc. in Ann Arbor as an environmental scientist, performing field chemistry and managing their Superfund laboratory data validation contract. Pursuing his longstanding interest in toxicology, Eric attended the University of Arizona where he earned both a M.S. in toxicology and Ph.D. in pharmacology and toxicology while performing research on the mechanisms of arsenic biotransformation in mammals. Post-doctoral training continued at the Burnham Institute in La Jolla, California where he developed a methodology for studying proteolysis in human disease. Eric joined the Remediation and Redevelopment Division as a toxicologist in January 2006 and looks forward to the challenges and opportunities of the regulatory environment.

Parts 201 and 213 Specialists

The loss of several high level managers during the last early retirement, the move of Lynelle Marolf to the position of Assistant Division Chief of RRD and the addition of Part 213 to RRD's responsibilities, have necessitated the addition of two specialist positions to serve as direct points of contact for the regulated community and staff regarding our major regulatory programs.

Patricia (Patty) Brandt has accepted the Part 201 program specialist position. Patty has a Bachelor of Science in Resource Development and a Juris Doctorate, and is a member of the State Bar of Michigan. Patty, who has worked for the DEQ/DNR for 26 years, was previously with RRD's Field Operations Section and has extensive policy, technical and legal experience in the Part 201 program. Her past experiences include enforcement work and acting as the point person for review and approval of municipal wastewater treatment facilities construction plans for SWQD (now Water Bureau). She is well respected by her peers and brings very good leadership, team building, communication and problem solving skills to the position. Patty also has a very deep passion for her work and has a vast array of knowledge in the Part 201 program.

Sharon Goble is the Part 213 program specialist. Sharon has a Bachelor of Science degree in Fisheries and Wildlife, a Masters in Business Administration, and has completed doctoral course work in Natural Resource Management. Sharon comes from the Environmental Science and Services Division (ESSD), Pollution Prevention and Compliance Assistance Section.

(Continued on next page)

Fine Lead Fraction

The RRD recently released a notice modifying when soil fine fraction lead analysis is necessary:

PURPOSE OF THIS NOTIFICATION:
The Michigan Department of Environmental Quality, Remediation and Redevelopment Division (RRD) has determined that when the total soil lead concentration is 75 ppm or less, separate fine and coarse fraction lead analyses are not required for comparison to the soil direct contact and the particulate soil inhalation criteria for lead. This is a preliminary threshold concentration based on a limited data set of 234 samples from twelve sites of contamination, including leaking underground storage tank sites. We will continue to study the relationship between total and fine fraction soil lead as more data become available. The RRD Op Memo 2 Attachment 1 is being updated to reflect this information. Additional data on the soil types of the existing samples as well as sampling locations (cities/counties) will help refine our analyses.

BACKGROUND:
For evaluation of the soil direct contact and particulate inhalation exposure pathways, the concentration of lead in the fine fraction, defined as less than 250 microns in size, is ***most*** relevant for comparison to the soil DCC and PSIC. The concentration of lead in the fine fraction is *generally* higher than the concentration in the coarse fraction. However, because the lead concentration in the coarse fraction is sometimes higher and it can be a source of fines (e.g., through crushing or breakdown), the coarse fraction lead concentration should also be compared to the soil lead DCC and PSIC. When both fine and coarse fraction lead concentrations are measured, the total lead concentration is calculated based on the relative weights of the fine and coarse fractions. The total lead concentration is then compared with the remaining criteria, if applicable. For further information on this subject see RRD Op Memo 2, Attachment 5.

CONTACTS:
For site-specific questions regarding this note, contact the project manager in the appropriate district. For the district office locations see the map at:
www.deq.state.mi.us/documents/deq-rrd-officemap-EQP4410.pdf

For technical questions regarding this note, please contact:
Ms. Christine Flaga
Toxicology Unit Chief
Remediation and Redevelopment Division
Phone: 517-373-0160

mailto:flagac@michigan.gov

Her former position with the Small Business Pollution Prevention and Loan Program has given her valuable experience in understanding the legislative process. Sharon has worked with the department for approximately 17 years in a variety of positions, which allow her to bring excellent experience and skills into the RRD. Her experience includes working in enforcement programs in both the Waste Management Division (now Waste and Hazardous Materials Division) and Surface Water Quality Division (now Water Bureau), a period with the Office of the Great Lakes, experience as an aquatic biologist with SWQD, and working for the Legislative Service Bureau. Her experience has provided her with strong skills, insight, and understanding of the stakeholder process, which will be very valuable to the division with the probable upcoming changes to the Part 213 program, including implementation of the Refined Petroleum Fund program.

Compliance and Enforcement, and Administration

Cynthia J. Mollenhour is a new Senior Environmental Quality Analyst (EQA) in the Compliance and Enforcement (C&E) Section. Cynthia (Cindy) graduated with a BS in Biology from the University of Detroit and attended the School of Medical Technology at Providence Hospital to become a certified Medical Technologist, a field she worked in for seven years. She began working for the DEQ, previously the DNR, in 1994 as an EQA for the Air Quality Division. In March 2002 she accepted a District Enforcement Coordinator position with RRD and worked in that capacity until Sept 2005, when she transferred to the C&E Unit in Lansing. Cindy says "I have found that working on cases in the RRD program can be both rewarding and frustrating at the same time. I enjoy seeing the outcome of our PMs' hard work to get a site cleaned up and redeveloped, but it is frustrating when I'm unable to establish a liable party to foot the bill or conduct the cleanup."

Judy Andersen is the new Financial Analyst in the Administration Section. Judy Andersen has returned to the State of Michigan after a fourteen year hiatus, during which time she earned both a BA in Business Administration and an MS in Administration and worked in an administrative capacity for Livingston County. At RRD she is learning to budget all our overhead costs and act as liaison between RRD and DMB's Space Management. She is especially interested in the work RRD and DEQ do to protect Michigan's farmland – since she lives on a family-owned centennial farm in Livingston County.

Judith Gapp is a new Environmental Quality Specialist with the Compliance and Enforcement Section. Judie has a BS in Geology and has worked in the UST program for the Oregon Department of Environmental Quality as well as for DEQ (DNR) for 10 years. She was most recently in our Waste Management Division working in the Scrap Tire program, and on some landfill cases. She will be doing Natural Resource Damage Assessment (NRDA) for RRD. Says Judie "Although I appreciate the experience I have gained in other agencies and divisions, I have always thought of RRD as 'home' and I'm glad to be back in the division."

Superfund

Toni Shuttleworth has joined the Superfund Section Grant and Technical Support Unit to work on the DSMOA (Defense and State Memorandum of Agreement) Cooperative Agreement and the Formerly Used Defense Sites (FUDS) from World War II. These sites of potential contamination are identified by the U.S. Army Corps of Engineers and via extensive research by Superfund staff. Toni has worked as a civil servant for 30 years, eight in the former Storage Tank Division of DEQ, and still believes the citizens she works for deserve only her best in excellence, honesty, integrity and ethics.

(Continued)

To Subscribe to ***The Remediator***

The RRD manages three listservers:

DEQ_RRD_NEWSLETTER, DEQ-RRD and DEQ-STD. The DEQ-RRD_NEWSLETTER provides information three times a year on the programs managed under the Remediation and Redevelopment Division. The DEQ-RRD provides notifications on all RRD managed programs, and Internet postings. The DEQ-STD listserver is jointly managed with the WHMD and provides program information and Internet changes regarding the Underground/Aboveground Storage Tank Programs, and the Leaking Underground Storage Tank Program. Click on one of the links below and add your name and email address into the email: DEQ_RRD_NEWSLETTER, DEQ-RRD or DEQ-STD

The Michigan Department of Environmental Quality (MDEQ) will not discriminate against any individual or group on the basis of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. Questions or concerns should be directed to the MDEQ Office of Human Services, P.O. Box 30473, Lansing, MI, 48909.

Leni L. Steiner-Zehender joined the RRD team on August 28th 2005, and is the **new Water Quality Technician in the Superfund Section – Specialized Sampling Unit**. Leni has a Bachelor of Arts in Environmental Science/Biology from Olivet College. She brings 6 years of experience working as an Environmental Scientist for Tetra Tech NUS and Earth Environmental Eastern. Leni is very excited and passionate about her position with the DEQ and desires to do all that she can to help protect our environment and natural resources!

Field Offices

Steven Kitler began a new chapter in his career with RRD as the **supervisor of the Cadillac District Office**, after 14 years of service in the Southeast Michigan District Office as Environmental Quality Analyst and Program Manager. According to Steve, he initially was more than a little apprehensive about moving his family, changing his job responsibilities, and establishing a place for himself in the Cadillac office. However, this apprehension was quickly laid to rest by the capable RRD staff in Cadillac who were very welcoming and made every effort to assist him in making this transition as smooth as possible. Steve and his family are scheduled to move into their new house just east of Cadillac in April.

Steve would like to relay his sincere respect for all the folks he worked with in the Southeast Michigan District Office over the past 14 years. "My time there was wonderful and full of challenges and learning. I will miss everyone very much."

Jeffrey Lippert has joined the staff at the Southeast Michigan Field Office. Jeff has a Bachelor of Science in Biology and Environmental Studies. He comes to RRD from the Water Bureau, where he worked for 15 months conducting NPDES municipal compliance. Prior to joining DEQ in 2004, Jeff worked as a consultant to EPA and DEQ, under the START and LOE contracts, respectively. Jeff has extensive work experience with landfill construction and closure, building demolition, asbestos abatement, SVE systems, tank removal, mercury contamination, drum removal, emergency response actions, along with soil, groundwater, and air sampling. About working as a Part 201 Project Manager, Jeff says, "It is very exciting to be working in RRD. I have the job that I have dreamed of having since college."

Lisa Summerfield is a new **Environmental Quality Analyst with the Lansing District Office**. Lisa has a BS in Earth Science and a Secondary Teaching Certification in the physical sciences from Michigan State University. She has worked within the Superfund Section of RRD as a project manager for the past 15 years. Lisa began her new career with the Lansing District Office in January of 2006 in the Part 213 program.